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on AUGUST 3, 2005
David Edwards
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8/3/05
Date of Signature

DKT 10133

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re patent application of:

Chu, Sung G.

Chen, Fu

Kolson, Natalie A

SERIAL NO: 09/976,658

FILED: October 9, 2001

FOR: Superplasticizer For Concrete
And Self-Leveling Compounds

EXAMINER: Tae H. Yoon

ART UNIT: 1714

MAIL STOP: AF

Commissioner For Patents

PO Box 1450

Alexandria, VA 22313-1450

Sir:

BRIEF FOR APPELLANT

THE REAL PARTY IN INTEREST

The real party in interest concerning the above-entitled application is Aqualon Company, a Division of Hercules Incorporated.

RELATED APPEALS AND INTERFERENCES

There are no other appeals or interferences known to appellants, the appellants' legal representative, or assignee concerning the above entitled

application which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

STATUS OF CLAIMS

This is an appeal from the final rejection under 35 U.S.C. 102(e) or in the alternative under 35 U.S. C. 103 (a) of Appellants' claims 1–15,17-31, 33-38, 40, and 42-48. Claims 16, 32, 39, and 40 have been canceled.

STATUS OF AMENDMENTS

In the Advisory Action dated April 29, 2005, the Examiner indicated that the Request for Reconsideration filed in response to the Final Rejection dated December 22, 2004 has been considered, but would not overcome the rejection of claims 1–15,17-31, 33-38, 40, and 42-48.

SUMMARY OF INVENTION

This invention is directed to a building material composition (see line 30 of page 7 to line 25 of page 8) comprising a co- or ter-polymer of (i) a material selected from the group consisting of carboxylic acid, sulfonic acid, phosphonic acid, amide form thereof and mixtures thereof and (ii) at least one polyethyleneglycol monoallyl ether sulfate (see line 28 of page 3 to line 28 of page 7) and a binding material comprised of cement or gypsum (see page 7, line 32 to line 3 of page 8).

THE ISSUES

Whether the rejection of claims 1–15,17-31, 33-38, 40, and 42-48 as being anticipated under 35 U.S.C. 102(e) by Chen et al ('747) is proper, since a Terminal Disclaimer was filed to overcome an obviousness type double patenting rejection based on the same reference.

Whether claims 1–15,17-31, 33-38, 40, and 42-48 are anticipated under 35 USC 102(e) or, in the alternative, under 35 USC 103(a) as being obvious over WO 02/083592.

TRAVERSE OF THE REJECTIONS

Appellants traverse the Examiner's rejection under 35 USC 102 (e) of claims 1–15,17-31, 33-38, 40, and 42-48 as being anticipated by Chen et al ('747).

Appellants traverse the Examiner's rejection under 35 USC 102 (e) of claims 1–15,17-31, 33-38, 40, and 42-48 as being anticipated by or in the alternative under 35 USC 103 (a) as being obvious over WO 02/083592.

THE CITED ART

U.S. Patent No.4, 6,444,747 (Chen et al) discloses the use of co or ter polymers of ethylenically unsaturated monomers with sulfate, phosphate, phosphite or carboxylic terminated polyalkylene oxide allyl ethers for use as a rheology modifiers for concrete and cement additives, in water treatment, in pulp and paper manufacturing processes, and in pretreating of metals among other uses.

WO 02/083592 (Betzdearborn Inc.) discloses a method of decreasing the viscosity of a mineral ore slurry by adding to a mineral ore slurry a viscosity modifying treatment such as co- or ter-polymers of ethylenically unsaturated monomers with sulfate or carboxylic terminated polyalkylene oxide allyl ethers.

ARGUMENTS

A. The Claims Are Not Properly Rejected Under 35 USC 102 (e) As Being Anticipated By Chen et al ('747).

a. The Rejection Improperly Ignores Important Differences Between The Claimed Invention and the Prior Art.

It is submitted that the Examiner in the Official Action mailed October 10, 2003 made an obviousness type double patenting rejection based on Chen et al ('747). In order to expedite the prosecution of this application, appellants submitted a Terminal Disclaimer to obviate the obviousness type double patenting rejection based on Chen et al ('747) in their response of April 8, 2004. This Terminal Disclaimer was accepted by the Examiner and at that time this reference of Chen et al ('747) should have been removed as a valid reference against the instant application. Hence, it is submitted that the Chen et al reference is no longer valid prior art against the instant application. Both patents are owned by the same assignee and both patents will now expire on the same date. Hence, the applicants have now rectified the problem associated with double patenting of not extending the length of the original patent by making sure that both patents expire of the same date.

It is submitted that an obviousness-type double patenting rejection is analogous to a rejection for obviousness under Section 103 of Title 35 of the United States Code, except that the patent principally underlying the rejection is not considered prior art. *Quad Environmental Tech. Corp. v. Union Sanitary District*, 946 F.2d 870, 20 USPQ2d 1392 (Fed. Cir. 1991); *in re Longi*, 759 F.2d 887, 225 USPQ645 (Fed. Cir. 1985). An applicant's disclosure cannot, of course, be used as prior art against him or her, even in an obviousness-type double patenting context. *In re Kaplan*, 789 F.2d 1574, 229 USPQ678 (Fed. Cir. 1986). The disclosure of a patent cited in support of a double patenting rejection cannot be use as though it were prior art, even where the disclosure is found in the claims. *General Foods Corp. v. Sludiengesellschaft Kohle mbH*, 972 F.2d 1272, 23 USPQ2d 1839 (Fed. Cir. 1992). There is a basic difference between obviousness type double patenting rejections and standard obviousness rejections: double patenting depends entirely on what is claimed in an issued patent. Obviousness relates to what is disclosed (whether or not claimed) in a prior art reference (whether or not a patent). A prior art reference that renders claimed subject matter obvious under 35 USC 103 does not necessarily create an obviousness type double patenting situation (*In re Bartfeld*, 925 F. 2d 1450, 17 USPQ2d 1885 (Fed. Cir. 1991)).

Although the application of sections 102 and 103 of Title 35 of the USC are some what different, there is a strong relationship between the two sections. In an obviousness setting, the art must contain a suggestion or motivation to modify it to function like the claimed invention. In an anticipation setting, where the only difference is in functional claim language, the applicant must show that the prior art does not have that function (In re Mills, 916 F.2d 680, 16 USPQ2d 1430 (Fed. Cir. 1990). Despite its best intentions and efforts, the Federal Circuit itself has been unable to achieve total purity in separating its analyses under sections 102 and 103. Although it recognizes quite properly that a court is not “inescapably led” to a conclusion of obviousness just because the anticipation question was close, (RCA Corp. v. Applied Digital Data Sys, Inc., 730 F.2d 1440, 221 USPQ 385 (Fed. Cir. 1984), the court has repeatedly remarked that anticipation is “the epitome of obviousness” (Jones v. Hardy, 727 F.2d 1524, 220 USPQ 1021 (Fed. Cir. 1984)). Hence, the doctrine of anticipation and obviousness are part of the same doctrine and are mutually exclusive in the relationship with obviousness type double patenting.

Hence, the above-mentioned Terminal Disclaimer has obviated the obviousness type double patenting rejection based on this patent. Therefore, this rejection is no longer valid and thus becomes a moot issue.

Appellants deny the Examiner’s allegation that the obviousness type double patenting rejection and the obviousness rejection under 35 USC 103 are different from the rejection of anticipation under 35 USC 102 . As mentioned above, it is submitted that the obviousness type double patenting rejection is different from the art-related rejection based on obviousness under 35 USC 103 and anticipation under 35 USC 102.

It must be reiterated that the obviousness type double patenting rejection and the art-related rejections based on obviousness and anticipation are mutually exclusive. In making the obviousness type double patenting rejection, the Examiner is ascertaining that the reference on which this rejection is based is an obvious extension of the patented invention and based on the Patent Statues, namely 35

USC 101, two patents cannot be granted for the same invention. Appellants accepted this obviousness type double patenting rejection and successfully overcame this rejection by filing a Terminal Disclaimer so that the duration of the instant appellation when patented will expire at the same time as the earlier patent. Based on the intent of 35 USC 101, this conforms to a single patent for a single invention. Hence, appellants have given up a portion of the term of the patent in order to avoid this double patenting rejection. On balance, the appellants have given up a portion of the term of their patent while the Examiner has given up the right to use this reference as a valid art reference against the instant invention. Both parties have agreed that the instant application is considered an obvious extension of the other. Hence, by the admission of the Examiner and the appellants that the instant application is an obvious type extension over of the prior art reference '747, the Examiner is now precluded from using this patent under the anticipation patent statute as the basis of a rejection for this application. Hence, for the reason set forth above, it is submitted that this rejection is improper and should be withdrawn.

WO 02/083592 reference does not disclose the present invention. Moreover, this reference is in a non-analogous art to the instant invention. This reference is directed to a method of decreasing the viscosity of a mineral ore slurry while the instant invention is directed to a building material composition. The term "building material" is defined in the paragraph starting on line 30 of page 7 to line 25 of page 8. In essence, building materials are defined as members of the class of construction materials, such as concrete, tile cements and adhesives, projection plasters, stuccos based on cement and synthetic binders, ready mixed mortars, etc. The WO '592 publication is not directed to a composition at all but rather to a method of reducing the viscosity of a viscous mineral ore slurry in order to make the transporting, pumping, and agitation of the mineral ore slurry more efficient. Hence, it is quite clear that the WO '592 reference is from a different field of endeavor than the instant invention (this is the primary criteria to consider for non-analogous arts). The other criteria for determining non-analogous fields is whether the prior art reference is still reasonably pertinent to the particular problems with which the inventor is involved. Since the facts above demonstrate that the WO '592 reference is directed to a different purpose, the inventor would accordingly have had less

motivation or occasion to consider it. In re Clay, 966 F.2d 656,23 USPQ2d 1058 (Fed. Cir. 1992). See also Heidelberger Druckmaschinen AG v. Hantscho Comm. Prods., Inc., 21 F.3d 1068, 30 USPQ2d 1377 (Fed. Cir. 1994).

Under the anticipation doctrine, at some risk of over simplification, the rule may be stated as follows: lack of originality or lack of priority, or a statutory bar, can be established only where the prior invention is identical to, or “anticipates”, the invention sought to be patented. It must be reiterated that each and every feature or element of a claim must be clearly shown. In the instant invention, the Examiner has not disclosed “a building material composition” or “a binding material.” In the instant application, a building material is a defined term as mentioned above and by its use embodies its defined meaning. In no stretch of the imagination will a person skilled in the art read a mineral or slurry as a building material as defined in the instant application and as is well accepted in the construction and building material industries. Moreover, the binding material is also a defined term in this application which must be at least one hydraulic or synthetic binder of from 2 to about 99 wt. %. In the WO ('592) publication, the gypsum which the Examiner is relying on may (or may not) contain sulfates which contain celestite or gypsum. “The precise composition of mineral ore slurry can vary greatly from site to site and even over time at one site due to changes in the ore body.” (See page 1, line 33 to page 2, line 2). Hence, it is not certain that gypsum is present since the ore from different locations have different components which can vary from about at least a dozen different materials. Secondly, the gypsum mentioned in this publication is incorporated into the ore itself not as a loose component that can act as a binding material. Hence, this reference supply does not identically establish each and every element or ingredient of the building material composition of the present invention.

It is further submitted that the Examiner is not giving any weight to the preamble by making such a rejection using non-analogous prior art. On the subject of the preamble, the Federal Circuit in Corning Glass Works v. Sumitomo Electric U.S.A., Inc. (9 USPQ2d 1962, Fed. Cir. 1989) said that:

“No litmus test can be given with respect to when the introductory words of a claim, the preamble, constitute a statement of purpose for a device

that a preamble is a limitation if it gives “meaning to the claim” may merely state the problem rather than lead one to the answer. The effective preamble language can be resolved only on review of the entity of the patent to gain an understanding of what the inventors actually invented and intended to encompass by the claim.”

In the instant application, the specification makes it quite clear that the inventors were working on building material formulations. The WO '592 publication makes it quite clear that it is dealing with a method of transporting mineral ore slurries. To read the claims of this WO '592 publication in light of the specification indiscriminately to cover all types of formulations would be divorced from reality. The instant invention is restricted to mortar and concrete formulations as defined in the specification which are significantly different than what the WO '592 publication intends. Hence, the claimed preamble as well as the ingredients in the claim limitations of the instant invention defines a specific and definite use that is non-analogous to that of a method of transporting mineral ore slurries.

b. Examiner Makes Erroneous Conclusions Based on WO 02/083592 references

Appellants deny the contention that:

“The instantly recited “comprising” permits any material such as a liquid or water in a slurry, and the slurry composition comprising the instant copolymers of acrylic acid and polyethyleneglycol monoallyl ether sulfate (page 2, lines 14-15) and gypsum (page 1, line 26) meets the instant building material absent further limitation contrary to applicant’s assertion”.


The above arguments rebut this allegation completely.

CONCLUSION

The claims are drawn to novel subject matter; the claims are drawn to concepts that are not anticipated by and obvious from the prior art. The Examiner has not shown every feature of the instant invention in a single

reference. Appellant is entitled to a patent under the Statutes. The Board is respectfully requested to reverse the Examiner.

Respectfully submitted,


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August , 2005

APPENDIX

This listing of claims replace all prior versions, and listings, of claims in the application:

1. A building material composition comprising
 - a) a co- or ter-polymer of (i) a material selected from the group consisting of carboxylic acid, sulfonic acid, phosphonic acid, amide form thereof and mixtures thereof and (ii) at least one polyethyleneglycol monoallyl ether sulfate and
 - b) a binding material comprised of cement or gypsum.
2. The building material composition of claim 1, wherein the binding material is Portland cement.
3. The building material composition of claim 2, wherein the cement is selected from the group consisting of concrete, tile cements and adhesives, projection plasters, stuccos based on cement and synthetic binders, ready mixed mortars, manually applied mortars, underwater concrete, joint cement, crack fillers, floor screeds, and adhesive mortars.
4. The building material composition of claim 1, wherein the gypsum is plaster of Paris.
5. The building material of claim 1, wherein the material of a)(i) is selected from the group consisting of acrylic acid, methacrylic acid, acrylamide, methacrylamide, N-methyl acrylamide, N, N-dimethyl acrylamide, N-isopropylacrylamide, maleic acid or anhydride, fumaric acid, itaconic acid, styrene, sulfonic acid, vinyl sulfonic acid, isopropenyl phosphonic acid, vinyl phosphonic acid, vinylidene di-phosphonic acid, 2-acrylamido-2-methylpropane sulfonic acid and mixtures thereof.
6. The building material of claim 1, wherein the weight average molecular weight (Mw) of the co- or ter-polymer has a lower limit of 1000 Daltons.

7. The building material of claim 1, wherein the weight average molecular weight (Mw) of the co- or ter-polymer has a lower limit of 1500 Daltons.

8. The building material of claim 1, wherein the weight average molecular weight (Mw) of the co- or ter-polymer has an upper limit of 1,000,000 Daltons.

9. The building material of claim 1, wherein the weight average molecular weight (Mw) of the co- or ter-polymer has an upper limit of 50,000 Daltons.

10. The building material of claim 1, wherein the weight average molecular weight (Mw) of the co- or ter-polymer has an upper limit of 25,000 Daltons.

11. The building material composition of claim 1, wherein a)(i) is acrylic acid.

12. The building material composition of claim 11, wherein a)(ii) is ammonium allylpolyethoxy (10) sulfate.

13. The building material composition of claim 12, wherein a)(ii) also includes 1-allyloxy-2-hydroxypropyl-3-sulfonic acid.

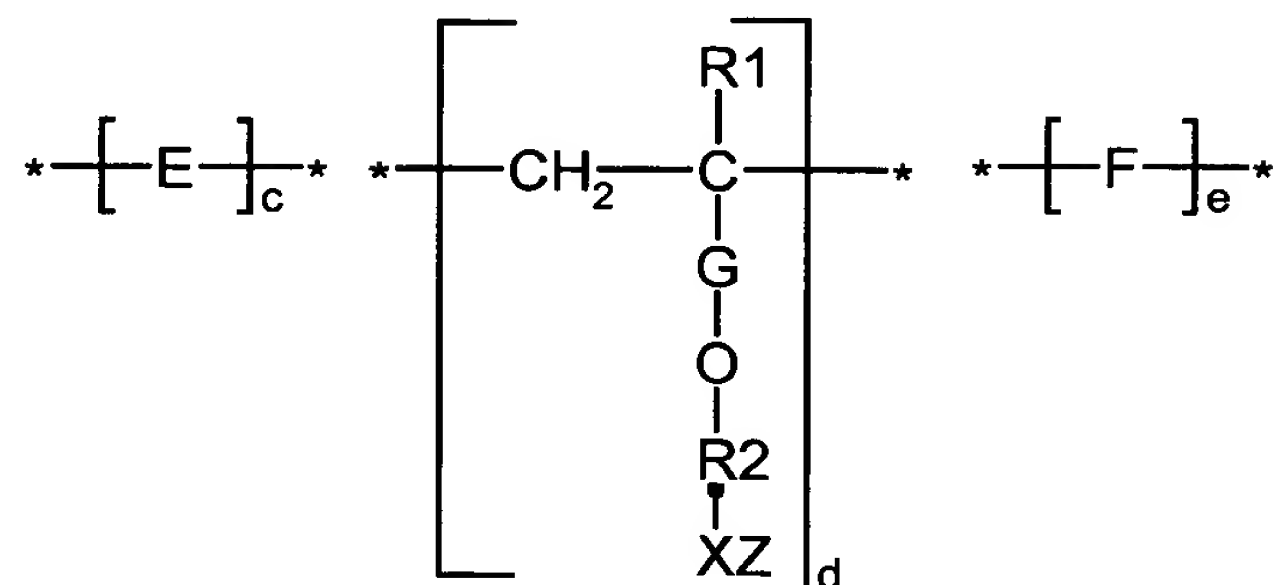
14. The building material composition of claim 1, wherein a)(i) is a mixture of acrylic acid and methacrylic acid and a)(ii) is ammonium allylpolyethoxy (10) sulfate.

15. The building material composition of claim 1, wherein a)(i) is a mixture of acrylic acid and 2-acrylamido-2-methylpropane sulfonic acid.

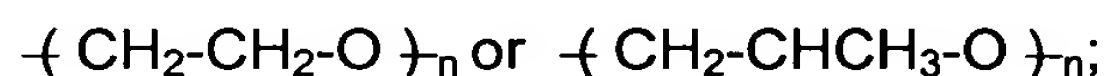
17. The building material composition of claim 1, wherein a)(i) is methacrylic acid and a)(ii) is ammonium allylpolyethoxy (10) sulfate.

18. A building material composition comprising

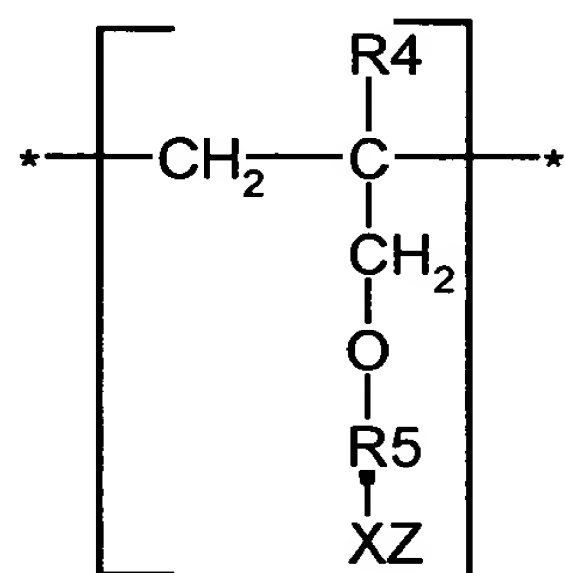
(a) a water-soluble or water dispersible polymer of the formula:



wherein E is the repeating unit remaining after polymerization of an ethylenically unsaturated compound; R₁ is H or lower (C₁-C₄) alkyl; G is -CH₂- or -CHCH₃-; R₂ is



wherein n ranges from about 1 to 100; X is SO₃, PO₃ or COO; Z is H, or a water soluble cationic moiety; F is a repeating unit of the formula:



wherein R₄ is H or lower (C₁-C₄) alkyl, R₅ is hydroxy substituted alkyl or alkylene having from 1 to 6 carbon atoms; c and d are positive integers; and e is a non-negative integer, and

(b) a binding material comprised of cement or gypsum.

19. The building material composition of claim 18, wherein said

ethylenically unsaturated compound is one or more of members selected from the group consisting of carboxylic acid, sulfonic acid, phosphonic acid, amide form thereof, and mixtures thereof.

20. The building material of claim 19, wherein said ethylenically unsaturated compound is one or more of members selected from the group consisting of acrylic acid, methacrylic acid, acrylamide, methacrylamide, N-methyl acrylamide, N, N-dimethyl acrylamide, N-isopropyl acrylamide, maleic acid or anhydride, fumaric acid, itaconic acid, styrene sulfonic acid, vinyl sulfonic acid, isopropenyl phosphonic acid, vinyl phosphonic acid, vinylidene diphosphonic acid, 2-acrylamido-2-methylpropane sulfonic acid and mixtures thereof.

21. The building material composition of claim 18, wherein said water-soluble cationic moiety is selected from the group consisting of Na, K, Ca and NH_4 .

22. The building material composition of claim 18, wherein the weight average molecular weight (Mw) ranges from 1,000–1,000,000.

23. The building material composition of claim 18, wherein the weight average molecular weight (Mw) ranges from about 1,000 to about 50,000.

24. The building material composition of claim 18, wherein the weight average molecular weight (Mw) ranges from about 1,500 to 25,000.

25. The building material composition of claim 18, wherein the ratio c:d:e ranges from about 20:10:1 to 1:1:20.

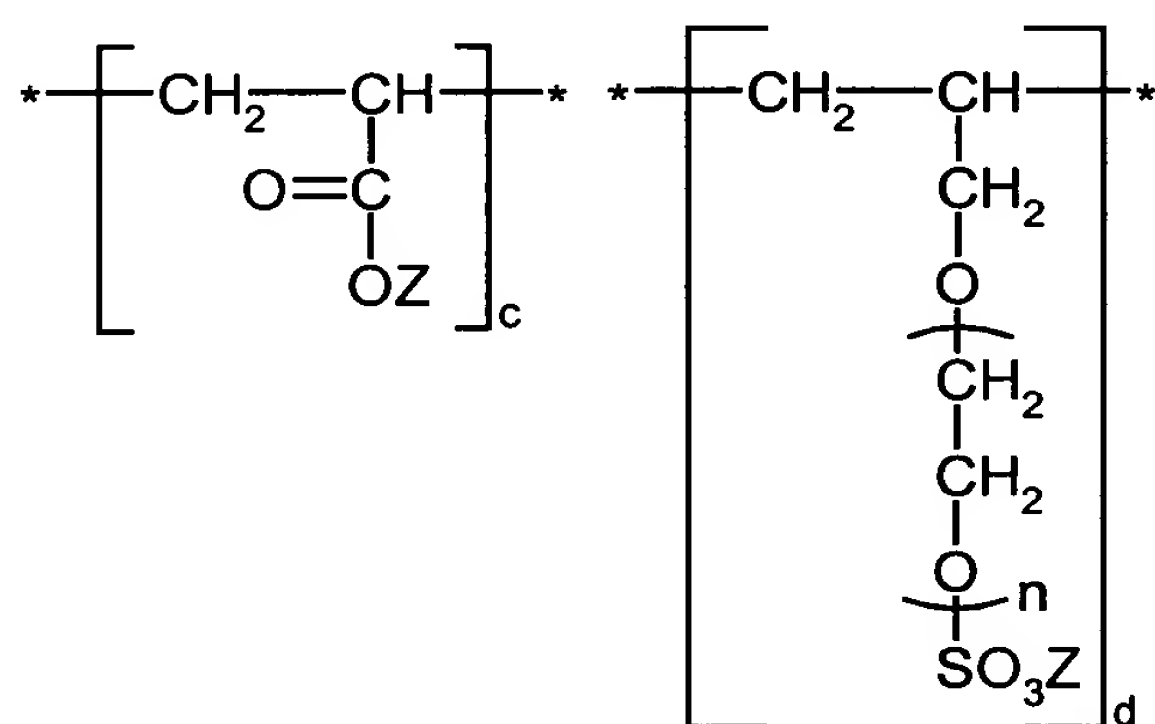
26. The building material composition of claim 18, wherein e is zero and the ration c:d ranges from about 30:1 to about 1:20.

27. The building material composition of claim 18, wherein n ranges from about 1 to 20.

28. The building material composition of claim 18, wherein the cement is selected from the group consisting of concrete, tile cements and adhesives, projection plasters, stuccos based on cement and synthetic binders, ready mixed mortars, manually applied mortars, underwater concrete, joint cement, crack fillers, floor screeds, and adhesive mortars.

29. The building material composition of claim 18, wherein the gypsum is plaster of Paris.

30. A building material composition comprising (a) a water-soluble or water dispersible polymer of the formula:



wherein n ranges from about 1-100, Z is hydrogen or a water-soluble cation, and c and d are integers of 1 or more where the ratio of c:d ranges from 30:1 to 1:20 and (b) a binding material of cement or gypsum.

31. The building material composition of claim 30, wherein said water soluble cation is selected from the group consisting of Na, K, Ca, NH₄, and mixtures thereof.

33. The building material composition of claim 30, wherein the molecular weight Mw ranges from about 1,000 to 1,000,000.

34. The building material composition of claim 30, wherein the molecular

weight Mw ranges from about 1,000 to 50,000.

35. The building material composition of claim 30, wherein the molecular weight Mw ranges from about 1,000 to 25,000.

36. The building material composition of claim 30, wherein n ranges from about 1 to 20.

37. The building material composition of claim 30, wherein the cement is selected from the group consisting of concrete, tile cements and adhesives, projection plasters, stuccos based on cement and synthetic binders, ready mixed mortars, manually applied mortars, underwater concrete, joint cement, crack fillers, floor screeds, and adhesive mortars.

38. The building material composition of claim 30, wherein the gypsum is plaster of Paris.

40. The building material composition of claim 48, wherein said water soluble cation is selected from the group consisting of Na, K, Ca, NH_4 , and mixtures thereof.

42. The building material composition of claim 48, wherein the molecular weight Mw ranges from about 1,000 to 1,000,000.

43. The building material composition of claim 48, wherein the molecular weight Mw ranges from about 1,000 to 50,000.

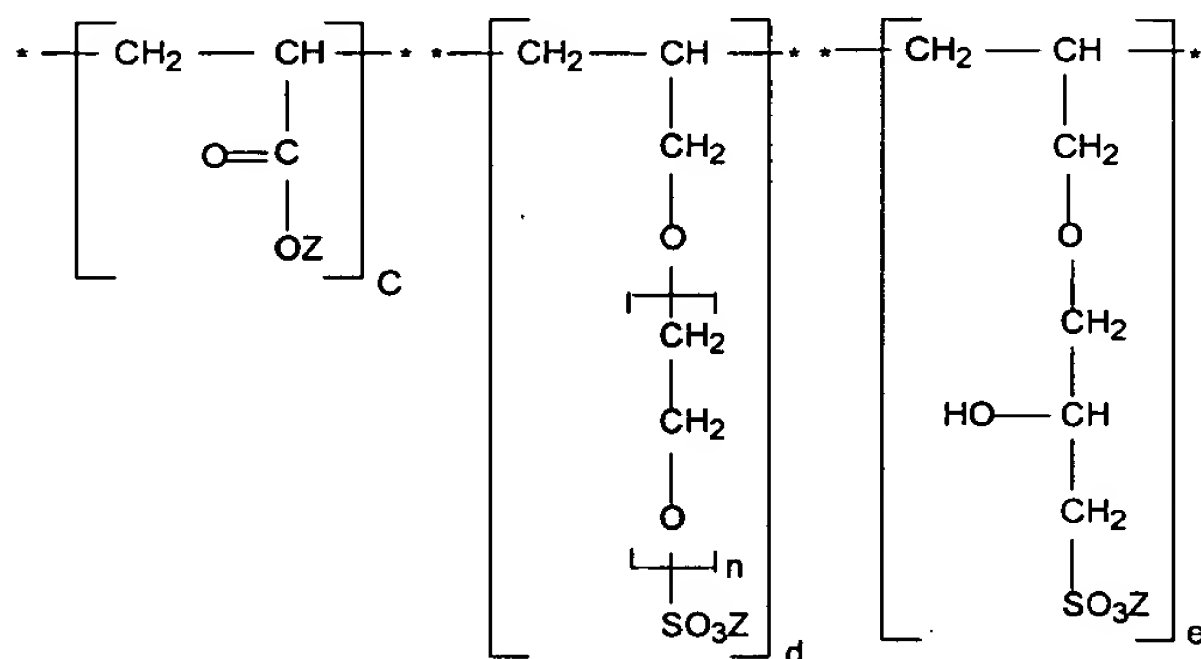
44. The building material composition of claim 48, wherein the molecular weight Mw ranges from about 1,000 to 25,000.

45. The building material composition of claim 48, wherein n ranges from about 1 to 20.

46. The building material composition of claim 48, wherein the cement is selected from the group consisting of concrete, tile cements and adhesives, projection plasters, stuccos based on cement and synthetic binders, ready mixed mortars, manually applied mortars, underwater concrete, joint cement, crack fillers, floor screeds, and adhesive mortars.

47. The building material composition of claim 48, wherein the gypsum is plaster of Paris.

48. A building material composition comprising (a) a water-soluble or water dispersible polymer of the formula



wherein n ranges from about 1-100, and z is hydrogen or a water-soluble cation, and c, d, and e are integers of 1 or more where the ratio of c:d:e ranges from about 20:10:1 to 1:1:20 and (b) a binding material of cement or gypsum.